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International Specialists in the Environment

MEMORANDUM

TO: Pete Culver, RPO

THRU: Philip Dula, Assistant Manager

FROM: E & E/FIT

DATE: December 8, 1989

SUBJECT: Recommendations and HRS considerations for the Screening Site Inspection of the Linwood Mining and Minerals Site (formerly Umthun Trucking), Buffalo, Iowa.
TDD# F-07-8809-008 PAN# FIA0236SA
Site# V86 Project# 001
Superfund Contact: Pete Culver
FIT Project Leader: Wesley McCall

The Ecology and Environment, Inc., Field Investigation Team (E & E/FIT) was tasked by the Region VII U.S. Environmental Protection Agency (EPA) to conduct a Screening Site Inspection (SSI) of the Linwood Quarry site (formerly Umthun Trucking). The field work for this project was conducted the week of May 22, 1989. Final revisions to the completed Data Transmittal were received on October 12, 1989.

Analytical results reveal that none of the arsenic, cadmium, mercury, selenium, and silver concentrations were above the instrument detection limits in any of the water samples collected. Other elements of concern, including barium, chromium, copper, and lead, were found in some of the samples (Table 3). None of these elements were found to exceed three times the background levels or the maximum contaminant levels (MCLs) for drinking water established by the EPA.

The material considered to be a potential hazardous waste at this site was the kiln ash dumped on the site surface. Four samples of this material were collected and analyzed for total metals. The kiln ash had levels of silver, selenium, cadmium, and copper slightly elevated with respect to two background soil samples. However, none of the concentrations of these elements, or the other heavy metals, exceeded three times background or three times the respective detection limits. Data results yielded a Hazardous Ranking System (HRS) Total Waste Characteristics Score of 0 for the ground water, surface water, and air routes. This yields a score of 0 for each pathway and the total score. Therefore, an HRS score was not developed.

Based on the analytical results and the HRS score the FIT recommends no further remedial work at this site (NFRAP) in relation to the surface dumped kiln ash. However, considering the unknown conditions within the mine area used as a venting/precipitating system for the lime

kilns, the FIT suggests follow-up sampling in this area. The private well of the Umthun Trucking terminal is cased through the portion of the mine used as the precipitation chamber. This well became contaminated with part per million levels of lead, cadmium, chromium, zinc, and vanadium. A pH of 2.7 was recorded for the water. Subsequently the well was re-cased and grouted, correcting the metals contamination and pH problem.

Since the lime kilns and venting system were in operation during field work for this project, the FIT could not collect samples in the mine vent chamber. The suggested follow-up sampling would help to define any potential or existing threat to the local ground water supply posed by this venting system.